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| 10/776,363   | 02/10/2004  | Timothy J. Walpus    | 020375-043500US     | 3217             |
| 20350 7590 03/17/2008<br>TOWNSEND AND TOWNSEND AND CREW, LLP<br>TWO EMBARCADERO CENTER<br>EIGHTH FLOOR<br>SAN FRANCISCO, CA 94111-3834 |             |                      |                     |                  |
| EXAMINER   |             |                      |                     |                  |
| ZHENG, JACKY X   |             |                      |                     |                  |
| ART UNIT   |             | PAPER NUMBER         |                     |                  |
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/776,363

**Applicant(s)**

WALPUS ET AL.

**Examiner**

JACKY X. ZHENG

**Art Unit**

2625

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on January 16, 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) 12-20 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on February 10, 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/S5108)
- 4) ☐ Interview Summary (PTO-413)
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_
- Paper No(s)/Mail Date \_\_\_\_\_

### DETAILED ACTION

1. This is a non-final office action based on the response filed on January 16, 2008.
2. Applicant's election of Group I, corresponding to Claims 1-11 without traverse in the reply filed on January 16, 2008 is acknowledged. Claims 12-20 are herein withdrawn from further consideration as being drawn to a non-elected invention.

### *Claim Rejections - 35 USC § 102*

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. **Claims 1-11** are rejected under 35 U.S.C. 102(e) as being anticipated by **Hopper et al.** (U.S. Patent No. 7,061,391).

**With regard to claim 1**, the claim is drawn to a retrofitted printing system including an existing printer and printer controller combination, the retrofitted printing system comprising: a monitor coupled to the printer, wherein the monitor is operable to provide an indication of status associated with the printer (see Hopper et al., i.e. Figure 1, Part 34, "Monitor"; column 3, lines 27-28, "printer status window 32 displayed within a monitor 34"); and a microprocessor based system controller coupled to the monitor and the printer controller (see Hopper et al., i.e. Figure 1, Part 2, "computer"; column 3, lines 65-67), wherein the system controller includes a computer readable medium, and wherein the computer readable medium includes instructions executable by the microprocessor to (see Hopper et al., i.e. column 3, lines 24-27, "Computer 2

*includes a printer monitor program 30 that generates information through a graphical user interface on the amount remaining for recourses.."): receive an operator command; format the operator command into a command compatible with the printer and printer controller combination; provide the command compatible With the printer and printer controller combination to the printer controller; and receive the indication of status associated with the printer from the monitor (see Hopper et al., i.e. column 5, lines 13-36, "printer monitor 30" (also known as "printer monitor program 30"); also see Figure 4 and claim 1;).*

**With regard to claim 2,** the claim is drawn to the retrofitted printing system including an existing printer and printer controller combination of claim 1, wherein the monitor comprises: an encoder, wherein the encoder is coupled to a stock advance mechanism of the printer (see Hopper et al., i.e. column 3, lines 12-23, different types of sensors, such as: "electromechanical sensor" for paper, "electrical sensor" for toner and etc.) ; and a monitor controller (one of ordinary skill in the art will realize that there will inherently be a "controller" (processors or microprocessors of certain types) within the "Monitor" as illustrated in Figure 1, Part 34), wherein the monitor controller is communicably coupled to the encoder and to the system controller, and wherein the monitor controller is operable to format information from the encoder to a format compatible with the system controller (see Hopper et al., i.e. Figure 1, "Monitor 34" is coupled to "Computer 2" and also coupled to "Resource Sensors 16a, 18a, 20a of Printer 1" (and "Resource Sensors 16b, 18b and 20b" of Printer 2) through "Network" (or through any other types of connection generally known in the art, such as: parallel, serial, USB interfaces, disclosed in Column 3, lines 5-12;).

**With regard to claim 3**, the claim is drawn to the retrofitted printing system including an existing printer and printer controller combination of claim 1, wherein a stock quantity is installed on the printer such that the printer is operable to print on the stock quantity, and wherein the computer readable medium further includes instructions executable by the microprocessor to: determine an actual length of the stock quantity utilized (*see Hopper et al., i.e. column 5, lines 37-67, disclose determination by "printer monitor program 30" the depletion rate per square inch of print coverage based on parameters such as: the number of pages in the print job, the compression ratio, file size, contrast, and boldness of the print job;*).

**With regard to claim 4**, the claim is drawn to the retrofitted printing system including an existing printer and printer controller combination of claim 3, wherein the operator command indicates a start of particular print job, and wherein the computer readable medium further includes instructions executable by the microprocessor to: access the particular print job; and based at least in part on the accessed print job, determining an optimum length of the stock quantity to be used (*see Hopper et al., i.e. column 5, line 37 - column 6, line 34, beside disclosing determination by "printer monitor program 30" the depletion rate per square inch of print coverage based on parameters such as: the number of pages in the print job, the compression ratio, file size, contrast, and boldness of the print job; Hopper et al. further disclose the calculation of "final estimate of the amount of toner that will be depleted (col. 6, line 9)" or "optimum length of the stock quantity to be used"; also see Figure 5;*).

**With regard to claim 5**, the claim is drawn to the retrofitted printing system including an existing printer and printer controller combination of claim 4, wherein the computer readable medium further includes instructions executable by the microprocessor to: determine an actual

length remaining on the stock quantity used (see Hopper et al., i.e. Figure 4, Step 110, "Display needle at position in gauge pointing to toner\_left value and display amount of toner left and percentage left"). .

**With regard to claim 6**, the claim is drawn to the retrofitted printing system including an existing printer and printer controller combination of claim 5, wherein the computer readable medium further includes instructions executable by the microprocessor to: compare the actual length remaining on the stock quantity and the optimum length of the stock quantity to be used (see Hopper et al., i.e. Figure 5, Step 148, compare "toner\_left"(remaining amount) to "toner\_used"(amount required for the print job)).

**With regard to claim 7**, the claim is drawn to the retrofitted printing system including an existing printer and printer controller combination of claim 6, wherein the system controller includes a display, and wherein the computer readable medium further includes instructions executable by the microprocessor to: display the actual length remaining on the stock quantity on the display and display the optimum length of the stock quantity to be used on the display (see Hopper et al., i.e. Figure 4, Step 110, "Display needle at position in gauge pointing to toner\_left value and display amount of toner left and percentage left"; also Figures 2 and 7;).

**With regard to claim 8**, the claim is drawn to the retrofitted printing system including an existing printer and printer controller combination of claim 4, wherein the computer readable medium further includes instructions executable by the microprocessor to: compare the actual length of the stock quantity utilized and the optimum length of the stock quantity to be used (see Hopper et al., i.e. Figure 6, Step 186, compare "pages printed" ("actual") to amount calculated

by "page\_per\_gram" times "max\_toner", to determine whether or not within "an acceptable level of error", see also column 7, line 66 - column 7, line 1).

**With regard to claim 9**, the claim is drawn to the retrofitted printing system including an existing printer and printer controller combination of claim 8, wherein the computer readable medium further includes instructions executable by the microprocessor to: determine a waste associated with the particular print job (see Hopper et al., i.e. Figure 6, Step 186, compare "pages printed" ("actual") to amount calculated by "page\_per\_gram" times "max\_toner", to determine whether or not within "an acceptable level of error", see also column 7, line 66 - column 7, line 1)..

**With regard to claim 10**, the claim is drawn to the retrofitted printing system including an existing printer and printer controller combination of claim 9, wherein the computer readable medium further includes instructions executable by the microprocessor to: log a status of the particular print job in relation to an operator associated with the particular print job (see Hopper et al., i.e. Figure 5, Step 130, receiving print job file); and based at least in part on the status of the particular print job, form a rating of the operator (see Hopper et al., i.e. Figure 5, Step 160, display toner needle at zero at gauge "or form a rating").

**With regard to claim 11**, the claim is drawn to the retrofitted printing system including an existing printer and printer controller combination of claim 1, wherein the system controller includes a graphical user interface (see Hopper et al., i.e. Figure 1, "Computer 2 (or the likes)" connected to "Monitor 34", GUI (such as in Figures 2 and 7) displayed in "Monitor 34").

***Conclusion***

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure (Applicant is respectfully suggested to consider at least following prior arts prior to filing of an amendment).

- A. Garr et al. (U.S. Patent No. 5,802,420) disclose a method and apparatus for predicting and displaying toner usage of a printer (i.e. Figure 7).
- B. Tani (U.S. Pub. No. 2002/0059106 A1) discloses a consumable goods and services providing system (i.e. Figures 1, 4 and 5).
- C. Maruyama et al. (U.S. Pub. No. 2005/0105934 A1) disclose a cartridge recycling information apparatus corresponding method and cartridge to be recycled.
- D. Kotani et al. (U.S. Patent No. 5,216,464) disclose an image forming apparatus having replaceable element which is replaced based on frequency of use (i.e. Figures 2 and 4).
- E. Beard et al. (U.S. Patent No. 6,940,613) disclose a system for managing replaceable modules in a digital print apparatus.
- F. Kahlecek et al. (U.S. Patent No. 5,673,190) disclose a multipurpose remote office machine management system.
- G. Lee (U.S. Patent No. 5,708,912) discloses a method and device for displaying an exchange message for a process cartridge with a process cartridge comprising non-volatile memory for storing data values.
- H. Springett (U.S. Patent No. 5,636,032) discloses a system and method for informing a user of a marking material status in a printing environment.



6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jacky X. Zheng whose telephone number is (571) 270-1122. The examiner can *normally* be reached on Monday-Friday, 8:30 a.m. - 5 p.m., Alt. Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Twyler M. Lamb can be reached on (571) 272-7406. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Jacky X. Zheng/

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Patent Examiner  
Art Unit: 2625  
March 6, 2008

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3/10/08